Environment Canada

Environnement Canada

Program Evaluation Branch

Direction de l'évaluation des programmes

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REPORT

PROGRAM EVALUATION REVIEW
CORPORATE PLANNING GROUP

ENVIRONMENT CANADA

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REPORT

PROGRAM EVALUATION REVIEW

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I. INTRODUCTION

This document reports on a review of the program evaluation function within Environment Canada (EC). The focus of this review has been to identify the scope and quality of existing evaluation information and to suggest a strategy and the means required to produce program evaluation outputs which will be of maximum benefit to program managers within the Department. The PASS Group would, at the outset, like to sincerely thank those managers who responded to an early draft summary of existing evaluation data in the Department. Their comments were of particular value as the study progressed. Specifically, we would like to thank the Departmental and all Service Comptrollers and the Internal Audit Bureau for their incisive and detailed observations.

II. BACKGROUND

During the summer of 1986, Treasury Board began a process which effectively accords Departments more freedom in the (internal) allocation of resources. In turn, this will require greater accountability on the part of Ministers and Departments. This is communicated through TB 800978/79/80 "Increased Authority and Accountability for Ministers and Departments" - (IMAA).

The IMAA process will yield a Memorandum of Understanding, (MOU), a main feature of which will be an agreed accountability framework. This will likely mean that the program evaluation function within the Department will have to be responsive to TB Circular Number 1977-47, which calls for the objective evaluation of all departmental programs on a three to five year cycle.

Given this requirement, the Evaluation Branch of the Corporate Planning Group (CPG), has determined that evaluation outputs must, above all, be of value to departmental program managers. Behind this thinking is the likelihood that program managers will be competing for resources which will become increasingly scarce over the next several years. If the volume of public debt continues to grow at a rate faster than the GNP, it would seem inevitable that the debt service portion of the budget will consume an increasing share of the total. In such circumstances it is difficult to imagine anything other than a climate for Estimates which is highly restrictive.

While the IMAA process may be the most immediate justification for a strong evaluation-type activity, it is symptomatic of a deeper fundamental shift in the environment in which government decision-making operates. This environment of restricted expenditures requires the most effective use of funds and/or the complementary aim of making do with less. Almost regardless of IMAA, it is this budgetary force which calls for the execution of well-supported evaluation-type studies.

The objective of program evaluation is to ensure that programs exist which can deliver the "biggest bang for the buck" and that they are structured in such a way that they are in fact doing so. For much of the time that program evaluation has been conducted in the federal government, it is fair to say that this objective has not been pursued with determination. To be fair, it wasn't *essential* that this be done. In the current and foreseeable climate however, it is apparent that program managers should be armed with data which will help them to defend those programs and components of programs which are of greatest value. A well founded assessment of the *worth* of programs will be an essential item.

This is the type of information which the program evaluation function is supposed to provide.

Prior to preparing an evaluation plan and committing to a set of results which program managers should expect from the function, it seemed sensible to determine, as closely as possible where the Department now stands in this regard. In other words before deciding "where we want to go" let's first find out "where we are". Because so many meaningful studies have been conducted throughout the Department, which have yielded data having some reference to that required for evaluation, this task was not as simple as it first appeared.

Accordingly the PASS Group was engaged to identify and review relevant studies and to provide its opinion regarding the extent to which each contributes to a current program evaluation portfolio.

To provide a good overall view of where the Department stands with respect to evaluation, a review of the relevant studies undertaken throughout the Department during the last 5 years was required. The objective of this review was to determine the extent to which they effectively yield evaluation-type results, or could be used as a basis for the establishment of such results. Beyond this, there was a further requirement to identify the ways and means by which the overall evaluation responsibility could be met in a practical manner, noting the constraints on resources and the objective of providing maximum benefit to departmental managers.

III. OBJECTIVES

The objectives of this assignment, therefore, were to:

1. Identify relevant reports.

2. Review the reports and provide an opinion respecting their contribution to evaluation; determine the extent to which they effectively yield evaluation-type results, or could be used, as a basis for the establishment of such results.

3. Provide an estimate of the current status of the evaluation function in relationship to TB 1977-47; (the three to five year cycle).

4. If applicable, provide an estimate of the cost to close the gap between the current status and that required by TB1977-47.

5. Attempt to further define current TB/OCG views respecting the evaluation-related topics of the MOU.

6. Suggest approaches and alternatives for future evaluation activities.

IV. METHODOLOGY

In order to respond to the project objectives, it is necessary to lay a foundation for the supply of information which Treasury Board will require for the MOU. But concepts regarding these topics of accountability and evaluation within the agencies are not static. An initial task, therefore, has been to determine through interviews and discussions the current thinking regarding the MOU at the Treasury Board.

A main feature of the methodology is the creation of a table showing activities, in accordance with the Operational Planning Framework, against phases of evaluation (i.e., evaluation framework, evaluation assessment, evaluation studies); and against the four principal issues of evaluation (rationale, impacts, achievements and alternatives).

The work has centered on the completion of this table by showing:

- For each activity, and for each evaluation component the degree (phase) of evaluation partially or fully completed;

- The degree to which currently available reports could be modified, developed or expanded to yield fulfillment of evaluation needs, and the associated costs;

- The estimated resources for the complete fulfillment of evaluation needs.

The information shown in the table was derived from a study of the "Results Definition" exercises, other organizational studies, and assessment/evaluation type reports with which the PASS Group has become familiar in the course of other assignments at Environment Canada.

These studies, however, represent only a portion of the evaluation-type work which has been undertaken within the Department.

Accordingly, a survey was done of a number of other studies containing evaluation-type information and data. This task was of particular importance in determining the degree to which work at the evaluation assessment and evaluation study level has been done, and the degree to which the Impact and Achievement items have been addressed. (The Results Definition exercises tend to address the Rationale and Alternatives aspects.) The 28 reports sampled in this study are listed and summarized in Appendix A. None of the three evaluations currently being conducted by the Evaluation Branch were considered. They are: Industrial Effluents and Emission Controls, Commercial/Toxic Chemicals, and Ocean Dumping Controls.

V. SCOPE

As far as we are able to determine, the current central agency emphasis in program evaluation is on the establishment of what could be termed, program achievement. This implies an orientation towards outcomes which contribute to national well-being - as contrasted to internal services. (This is not to imply that these internal services are unimportant; they are clearly essential, but the "bottom line" for the Government is on the effect of its programs *outside* of government.) This focus was a direct factor in the choice of reports selected for study within this project. Accordingly, evaluation reports on activities which are intended to provide advice, planning, research (for internal use), administration or internal coordination have not been addressed within this study. Another additional consideration in this choice was that a good deal of the concern in the areas of administration and coordination would be on efficiency - many aspects of which would be covered by internal audit.

Another factor in choosing reports for this study was the age of the various reports. In accordance with the OCG five-year evaluation cycle, reports older than 80/81 are not rated as providing current coverage. In this study however, they are credited to the degree that they can still provide worthwhile background information, or have created/developed currently relevant program structures, objectives or issues.

VI. FINDINGS

A. Relationship of Evaluation to Departmental/T.B. MOU

The climate of thought in the Treasury Board, so far as evaluation is concerned, is a focus on program outcomes. What is the program contributing to the prevention or elimination of problems? How is it using opportunities to improve the material (economic) or social conditions of

groups or individuals? In short, how does the program advance national well-being?

Concurrent with this emphasis, there is a lessening of concern for:
- fine points of mandates;
- impacts as such (i.e. the intermediate steps to results);
- ritualistic searches for alternatives.

This thinking coincides with the thrust that resources and the (greater) freedom to distribute them to achieve results have been given to departmental Ministers, through the IMAA process.

Accordingly, our sense is that the TB Secretariat in drawing up the MOU will primarily be concerned that program evaluation can give continuing assurance that the objectives, for which resources have been invested, are being achieved.

Specific to Environment Canada, we became aware during the study that the Deputy Controller General has expressed a lack of enthusiam for the evaluation frameworks and assessments that have consumed most of the Evaluation Branch's resources in the past. The OCG is interested in the final evaluation studies that answer questions rather than merely identify them. (As a rule of thumb evaluation resources might best be allocated as follows: Frameworks - 10%, Assessments - 20%, Studies - 70%. While frameworks and assessments are essential tools in conducting Evaluation they should not become ends in themselves.)

B. Coverage of Evaluation Requirements

Report Review

As described earlier in this report, the primary vehicle for the presentation of the findings of this study is a table, showing various planning elements, and setting out the program evaluation phases and issues, and degree of coverage which can be attributed to each. The foundation for the table was the review of the individual reports which constitute the body of past EC evaluation work. Appendix A of this report, lists the reports which we anticipated would yield significant evaluation-related information, and were thus included in this study.

In addition, in Appendix A, the contribution of each of the subject studies is described. Note that the contribution is described only in terms of the fulfillment of evaluation requirements, not in substantive terms. The Appendix does not describe for example, the substantive issues; nor, in general, does it rate the quality of the work, but each work has been reviewed to the point where it could be ascertained that a referenced report does have the quality needed to at least minimally satisfy an evaluation requirement.

C. Current Status of Evaluation

Appendix A provides a list of the 28 studies reviewed, describes each report and provides our opinion with respect to its contribution to evaluation.

Appendix B is a table which lists departmental activities (corresponding to the OPF) and shows the degree of evaluation coverage which we believe is provided by each of the 28 reports against departmental activities.

Appendix C provides, first, our estimate of the total investment required over a five year cycle to maintain currency in each of the 17 activities. A second column provides our estimate of the outstanding requirement at this time.

A more comprehensive description precedes each of the Appendices but it should be emphasized that the data presented is our best estimate based on our analysis and opinion with respect to the contribution of each report and the evaluation investment required. As such these figures may be best regarded as "order of magnitude" and in this context we believe they represent a reasonably accurate picture of the status of evaluation in the Department (excluding current work on the three evaluations referred to in Section IV - Methodology).

The results of the above analysis, contained in the appendices, are as follows:

1. Approximately $2 million is required on a 5 year cycle to maintain currency.

2. This translates to an annual evaluation budget of $400,000.

3. At the mid point of a 5 year cycle (in effect, at any given time), there should be *current* evaluation results valued at $1 million on hand, and a further $1 million to be spent in the cycle.

4. Our estimate of the value of results on hand is approximately $400,000; $600,000 short of a current status.

5. If the Department wanted to achieve "current" status within, e.g., 3 years, $200,000 ($600,000 ÷ 3) would have to be added annually to the evaluation budget. If a 5 year goal to attain currency is more appropriate, $125,000 ($600,000 ÷ 5) should be added.

6. In the event, for example, of a 3 year goal, the annual evaluation budget would be $600,000 for each of the first three years and $400,000, annually thereafter (current dollars).

7. The above estimates are based on utilizing consultants; should departmental resources be allocated, the estimates can be adjusted accordingly.

As stated above, we believe all of the estimates should be viewed as order of magnitude. Basically they show that the Department's evaluation status is somewhat less than 50% of a current status, (and, given resources dedicated to the function, will likely remain there). These findings correspond with other non-quantitative data which surfaced during the study. The Management Practices Branch of the OCG has expressed the view that Environment is a well managed department but that an exception, a "black spot", has been the Program Evaluation function. Views expressed by several managers throughout the Department tend to support these findings.

Program Evaluation has been a relatively neglected function at Environment Canada.

VII. CONCLUSIONS

So what?

Who cares?

Where's the "hook" in maintaining a program evaluation status desired by a central agency? In being in the "good books" with respect to TB1977-47? Is the IMAA/MOU a clear motivation for getting up to speed? Will, when the full light of day is finally shed upon it and all of its ramifications are finally revealed, IMAA even be viewed as being beneficial for the Department?

Clearly, Program Evaluation for its own sake, perpetuated as an "art form" (as some in the Department have called it in the past), responsive to a central agency circular or supporting similar motivations, is not a flag that will be vigorously saluted during these lean times when the bill for doing so will be more than $2.5 million over the next 5 years.

Environment Canada is in grim shape from a program evaluation perspective and it is our conclusion that this situation is unlikely to change unless the function can deliver the goods to program managers who will need the information which program evaluation provides in order to prepare to defend the most worthy aspects of their programs.

VIII. RECOMMENDATIONS

A. Preamble

The Management Practices Branch has a generally positive impression of the quality of managers in Environment Canada. So too does this consulting firm. Given that Environment is a generally well managed Department, populated by competent managers, how does one explain the sorry state of Program Evaluation?

Let's examine a few possibilities:

1. Is there a general belief in the Services that the function can be adequately performed by CPG without assistance from them?

2. Is there a general belief among program managers that Program Evaluation is of no value to them, perhaps even a threat to their resources or their programs?

3. Is there a fear that while Program Evaluation could very well be a "life-saver" in the years ahead it could also be conducted by incompetent practitioners with the opposite result?

4. Are managers generally of the opinion that their programs and resources willl not really be under continuing attack during the next several years and therefore they have no need for the type of program evaluation data which would help them provide strong counter-action in defense of programs, components and resources which are of greatest value?

5. Does senior management in the Department not really care if the Department, per se, is positioned to provide for the greatest return on its investment; that scarce resources are allocated where they will achieve the greatest impact?

There is probably some truth to most of the above possibilities. But for the most part these somewhat obvious questions should not logically apply in a Department populated by competent managers. It is true, for example, that CPG is charged with a corporate evaluation responsibility but it is no doubt common knowledge that its resources are in no way adequate to meet OCG requirements, much less provide meaningful support to departmental program managers.

We believe the problem is most closely identified in the second and third possibilities above. We think the Program Evaluation function must prove itself to program managers before it can provide them with the outputs they will require from it in the immediate and foreseeable future. Further we believe that once it has proven itself to be of value, and increasingly so, the function's problem will not be meeting OCG requirements but meeting the demand for evaluations from within the Department. We believe this because:

1. Pressure on programs and resources - the necessity to allocate resources effectively-will create a continuing demand for competent program evaluation.

2. While the Department is not yet "up to speed", our findings clearly show that with the evaluation results in hand, the function is in an excellent position for a "fresh start"; advantage can be taken of

existing data identified in this study to start conducting evaluation studies immediately (rather than frameworks or assessments).

3. All the players are relatively new to their jobs. The Deputy, all Service ADM's, ADM/CPG, the Evaluation Manager. No one really cares why Program Evaluation was not strongly supported in the past and no one in a key position today is tied to that past.

4. Although the Evaluation Branch is significantly understaffed at present, in our view the incumbent Evaluation Manager is more than capable of positioning his Branch to respond to the demand and demonstrating, in short order, the worth of the function to program managers.

B. Recommendations

1. *Recommendation*: The Evaluation Branch should proceed with a limited number of evaluation studies which can be conducted for the most part with CPG resources and which could be expected to produce results which will be of a standard indicative of outputs to be expected in future.

   Rationale: To establish the credibility of the Branch and the value of studies to program managers.

2. *Recommendation*: An Evaluation Committee, preferably consisting of departmental and service comptrollers as well as the Manager, Evaluation and chaired by the Director General, Management Support Directorate, CPG, be established.

   Rationale: To guide the function; to ensure that evaluation funds are directed where they will achieve the greatest benefit; to provide a link in respective areas to data pertaining to resource bases, historical financial, and other data.

3. *Recommendation*: Further to recommendation number one, the comptrollers on the Evaluation Committee should develop a series of practicable options for conducting studies on a shared basis. These may include secondments from or to the Evaluation Branch, shared funding with the Evaluation Branch, and use of Evaluation Branch funds to enhance a planned study so that it fulfills evaluation criteria.

   Such options can constitute a framework that can be applied in a flexible manner.

   Rationale: To ensure that evaluation investments are applied to maximum advantage in support of providing program managers with the coverage and the quality needed.

4. *Recommendation*:: The Evaluation Branch produces an annual Comprehensive Program Evaluation Schedule. Further to the above this Schedule should be proposed by the Evaluation Manager for Evaluation Committee review and approval. It should focus on a set of results expected of the function and the process of commitment to this set of results should include a "sign-off" of the Schedule by all ADM's.

   Rationale: To provide for accountability of the function and for at least one institutional process that will contribute to its continuity and its responsiveness to departmental needs.

IX. CLOSING STATEMENT

Our terms of reference for this study emphasized that while the IMAA/MOU was the catalyst for having a fresh look at program evaluation in the Department, our optic should be that central agency requirements be viewed as secondary - a by-product- of the provision of meaningful results for the Department and its program managers.

We believe that this approach, with or without this study, is a winning one. At present the evaluation budget is approximately one-half of that required according to our findings. In due course, if reasonable coverage is to be achieved, the rest must come from those programs being evaluated. This will only happen if it is apparent that it is in their interest to share in the evaluation investment. Given the potential utility of evaluation results in the foreseeable future, once its value has been proven, these shared investments -based on self interest - should follow.

We affirm this because the attitude of the Evaluation Branch is the right one for this Department and the market for evaluation studies is clearly in view.

Finally, we suggest that the contributions of an Evaluation Committee made up of comptrollers acting in the interests of the Services they represent, as well as the process of ADM sign-off of the Evaluation Plan will ensure a situation in which everybody wins.

APPENDIX A

REPORT REVIEW

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REPORT REVIEW

The EC reports which were reviewed are listed according to program structure. The parenthetical note gives the reporting agency or firm. The number attached to each report is referenced in Table 1 (found on pages 6 to 8 of this report).

Atmospheric Environmental Service (AES)

Weather Services/Overall

1. Report of the Task Force on the Level of Weather Services. (DOE), July 1983.
   This report of an outside task force operating under an interdepartmental committee, identifies:
   a) The mandate and the effective rationale for the Weather Services activity; and
   b) Criteria for the establishment of levels of service for the various aspects of the Services.
   Status - This report lays a good foundation for the creation of performance indicators which are necessary for program effectiveness work. The (admittedly not easy) creation of a quantitative measure has, however, not been done.

2. Report of the Auditor General (OAG). October 1985. This is the report of the comprehensive audit of AES by the OAG. It provides:
   a) An overall description of the Service, including its mandate; and
   b) A description of the steps which the AES is taking to improve its operations.
   Status - This document gives a good overall view of the Weather Services (on which it concentrates); it yields a balanced perspective. It does not show outcomes. It would help to flesh out evaluation studies.

3. Task Force on Program Review - Study Team Report on Improved Program Delivery - Environment (Layt Report) July 1985.
   This document covers much the same ground as the OAG document.
   Status - It buttresses other work on evaluation framework topics.

4. Data Acquisition Activities, AES, (DOE Internal Audit Branch) March 1985. This report examines the efficiency and the economy with which this (fundamental) activity is undertaken; it discusses among other aspects organization.
   Status - While worthwhile this work does not obviate the need for evaluation focussed studies.

Weather Services/Public

5. Public Weather Forecasting Verification at Toronto and Vancouver. (University Geographers). November 1981.
   A report on the accuracy with which these stations forecast precipitation (amount and persistence), wind and temperature. Consequently, it identifies Impacts. (As well, it suggests improvements in the operation.)

Weather Services/Marine

6. Marine Weather and Ice Services: An Action Plan (resulting) from Evaluation. (AES), July 1983.
The original evaluation work has been inferred from the Action Plans; it could reasonably be inferred that the original work yielded a comprehensive management audit. That work was not Achievement oriented. It forms a useful complement to Ref. 1 above. It does not comment on program output or the impact of resource change.

Weather Services/Economic

7. Economic Value of Weather Information (DPA). March 1985. This report synthesizes the then available evidence to derive estimates of the economic worth of the reports from the Weather Services. The results could be described as "best estimates"; and, the discussion establishes how serious are the deficiences in knowledge.
Status: This work provides a good starting point, but even to establish a reasonably well-supported estimate of a "lowest value", considerably more work would be required.

Weather Services/Canadian Forces

8. Canadian Forces Meteorological & Oceanographic Services: Evaluation. (Evaluation Branch, DND). May 1984.
This report identifies:
    a) Component Profile;
    b) Activity Mandate and Rationale; and
    c) Achievements.

Status: This work fills a current evaluation requirement.

Weather Services/Support System

9. (AES) Instrument Services Program: Evaluation. (DOE CGP) March 1980.
This report identifies:
    a) Component Profiles;
    b) Mandate and Rationales;
    c) Impacts and Achievements; and
    d) Efficiency and Economy of Operation.

Status: This work could be readily updated to provide current valid evaluation coverage.

Climate Services

10. (AES) Canadian Climate Program: Evaluation Framework (Abt and Associates) February 1986.
This report identifies:
    a) Component Profile;
    b) Mandate & Rationale; } including Logic Model;
    c) Objectives; }
    d) Impacts and Effects Sought;
    e) Issues and their priorities; and
    f) Alternatives.

Status: This work yields a currently valid full Framework phase. It should be observed, however, that it does not provide performance indicators. An Evaluation plan could be readily created.

11. Climate Forecasts and the Canadian Wheat Board (AES). 1983.
A good report which treats a difficult subject and which identifies the lack of the (economic) worth to the Wheat Board of these forecasts until very significant improvements in climate (note: not weather) prediction come about.

Conservation and Protection

Inland Waters & Land Management

Inland Waters/Overall

12. (ECS) Inland Waters Directorate: Results Definition Study (Impact). February 1986.
This study identifies:
a) Mandate and Rationale (including a logic model);
b) Performance Measurement; and
c) Issues - operational (e.g. communications with clients); and organizational.
This work,
-has some actual evaluation results related to the mandate and the organization;
-requires some work to reconcile/overcome inconsistencies in the performance measures and indicators;
-identifies the relationship between the (water) data model and the organizational entities - where data logic cuts across the organizational structure.

Status: This work could easily be converted into a Framework and, with appropriate staff work, could support an evaluation plan. Note, however, that the performance indicators need considerable work to yield quantitative measures.

13. (ECS) (Inland Waters Directorate) River Basin Planning and Implementation Programs: Evaluation (DOE CPG) November 1981.
This program has been phased out. The work is of some current interest, however, in that it indicates the relative importance of these programs from the evaluation perspective or, more precisely, why such types of programs do not make good subjects for evaluation.

14. A Study of Current and Alternative Methods of Conducting Water Management Research (Gore & Storrie), October 1985.
Of some interest as a good example of current study approaches to research management.
Status: Not relevant to this Review (with its particular focus).

Inland Waters/Water Quality

15. Sediment Surveys Report (Program Manager), 1986.
This document relates sediment survey work to the overall IWD operations. (see Ref. 9)
Within this context it identifies:
a) Mandate and Rationale (including a logic model);
b) Suggested future developments (and, thus, implicitly indicates some issues).

Status: Could easily be converted into a formal Framework and, with appropriate staff work, could support an evaluation plan. It is complementary to Ref. 9

Inland Waters/Water Data

16. (Organizational) Study of Collection and Delivery of Water Quantity Data. (Walker/Acres) September 1985.
This study identifies:
a) Component Profile;
b) (Relative worth of) Alternative organizations; and
c) Suggested changes in organization and operation within the current mode.
Status: Could be easily converted into a Framework and, with appropriate staff work could support an evaluation plan. The work yields, now, evaluation results related to Alternatives and current organization and operations.

17. Hydrometric Surveys (component of the Water Management Data Program): Evaluation. (DOE CPG). May 1980.
This work identifies:
a) Mandate and Rationale;
b) Overlaps and Alternatives; and
c) Achievements (in terms of client satisfaction).
Status: Complements and provides background to Ref. 16. Could be very easily integrated into a Framework along with that other study.
(Note a remark typical of these studies: "No adequate criteria (exist) for (data) network evaluation purposes.")

Land Management/Overall

18. (ECS) Lands Directorate Results Definition Study: (Impact) January 1986.
This study identifies:
a) Mandate and Rationale (including logic models);
b) Performance Measures; and
c) Issues (in form of identified potential opportunities for improvement).
Status: Could be converted into a Framework. The performance measures, because of the nature of federal/provincial jurisdictions, tend to be output (vs outcome) types. The study has some valid evaluation results related to mandate and organization, and the mode of operations.

Land Management/Land Conservation

19. Land Conservation Framework Assessment. (Taylor Morrison) July 1984.
This study identifies:
a) Mandate and Rationale (including logic model);
b) Overlaps; and
c) Issues (lines of enquiry).
Status: Effectively provides a currently valid evaluation framework. But note that a good deal of work would be required in an evaluation (or as preliminary) as there is no departmental strategic policy on lands. There is no good basis for judging the level of service to clients. Contributes some useful thoughts as to an approach to performance measures.

Wildlife Management/Overall

20. Canadian Wildlife Service: Results Definition Study (Impact) January 1986.
This work identifies:
a) Mandate and Rationale (including logic model);
b) Performance Measures; and
c) Issues (in form of possible weaknesses or possible opportunities for improvement).
Status: Could be easily turned into a Framework and, with appropriate staff work, could support an evaluation plan.

Wildlife Management/Migratory Bird Conservation

21. Migratory Birds Conservation Program (DOE CPG), December 1981.
This is a "critical" type evaluation which draws attention to areas which need correction. As such, it identifies:
a) Mandate and Rationale;
b) Objectives;
c) Issues; and
d) Achievements (partially)
Status: Could be readily updated as a "traditional" evaluation (i.e. without "hard" performance measures).

Environmental Protection/Overall

22. Enviromental Protection Programs: Framework (Peat Marwick) October 1985.
This work identifies:
a) Component Profile;
b) Mandate and Rationale (including logic models);
c) Issues and priorities; and
d) Achievement criteria topic.
Status: A good report which provides a solid foundation for the creation of Frameworks for the individual activities within Environmental Protection.

23. Environmental Protection Service: Results Definition Study (Impact), December 1984.
This study identifies:
a) Component Profile;
b) Mandate and Rationale (including logic model);
c) Performance measures; and
d) Issues (related to policy and organization for service-wide topics).
Status: Could be easily converted into a Framework, and with appropriate staff work, could support an evaluation plan.
Note that some Issues relate to policy (e.g. a focus on ambiguous mandate statements). These would be better addressed via a staff process prior to evaluation.

24. (EPS) Environmental Emergency Program: Evaluation. (DOE CPG) March 1980.
This study identifies:
a) Mandate and Rationale;
b) Impacts and Effects; and
c) Alternatives.

Status: This evaluation could be updated fairly readily. Again, however, this is a case in which sufficient information has not existed with which to provide a basis for establishing goals, and associated resource levels.

25. Conservation and Protection Services - Atlantic Region: Results Definition Study (Regional Staff). October 1986
This work identifies:
a) Component Profile;
b) Rationale for activities (including logic model);
c) Performance Measures (not in draft document).
Status: Provides a good basis for the creation of a parallel document for the newly combined services at HQ.

Parks Canada

26. National Historic Parks & Sites: Framework (CPER) September 1985.
This work identifies:
a) Component Profile;
b) Mandate and Rationale (including logic model);
c) Objectives;
d) Overlap;
e) Impacts and Effects;
f) Alternatives;
g) Performance Indicators; and
h) Potential Evaluation Issues.
Status: This report yields a currently valid Framework which with appropriate staff work could support an evaluation plan.

27. National Parks Program: Evaluation Assessment (DOE CPG), June 1982.
This study identifies:
a) Component Profile;
b) Potential Evaluation Issues;
c) Evaluation Strategies.
Status: Complements Ref.26 by facilitating creation of an evaluation plan.

Federal Evironment Assessment & Review Office

28. Environmental Assessment & Review Process (EARP): Evaluation (Econosult), July 1982.
Status: Not of central relevance as EARP is a departmental coordination process. It provides some background for evaluation of FEARO operations.

APPENDIX B

EXISTING PROGRAM EVALUATION COVERAGE

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EXISTING PROGRAM EVALUATION COVERAGE

Appendix B, set out in the following pages, identifies the existing program evaluation coverage, as determined through the course of this study.

The first three columns of the table are self-explanatory, and relate directly to the departmental Operational Planning Framework. The fourth column (Phase and Issue Covered) identifies the program evaluation phases and issues which have been to some extent covered for each of the sub-elements, through one or more of the studies summarized in Appendix A.

The fifth column (Degree of Coverage) reflects our assessment of how the existing information compares to that which would be required to fulfill central agency program evaluation criteria. The degree of coverage is stated in percentage terms. (e.g. 1.0 is complete, 0.2 is twenty percent of full coverage). This percentage refers only to the specified phase/issue of the element, not to the total program of evaluation work which would be required to yield full evaluation coverage. Note that reference numbers are provided for each item in column five. These numbers correspond to the unique numbers identifying each of the 28 reports summarized in Appendix A.

Studies reviewed did not necessarily correspond "neatly" with the current activity structure. Nor, in many of the studies, were either evaluation phases or issues discrete. Reports were analyzed to yield an estimate of the value they provide compared to full coverage. These values were then rolled up in relationship to the current activity structure. As stated several times in this Report, this method relied heavily on our judgement regarding these values, and even more heavily on the total rolled-up value relating to each Activity which is reflected in Appendix C. Nevertheless we are confident that the figures derived are reasonable representations of existing program evaluation coverage.

ENVIRONMENT CANADA
PROGRAM EVALUATION SITUATION REPRESENTATION

PLANNING ELEMENT	ACTIVITY/ COMPONENT	ACTIVITY/ SUB-ACTIVITY/ ELEMENT	PHASE & ISSUE COVERED	DEGREE OF COVERAGE & REFERENCE	REMARKS
Atmospheric Environment	Weather Services	All Elements*	Framework; Rationale Impact and Achievements	0.2 of Framework for each element (Ref. 1)	
			Framework; Rationale and Impacts	1.0 of Rationales 0.3 of Impact (Ref. 2)	Comprehensive Audit
			Framework; Rationale and Impacts	1.0 of Rationales 0.3 of Impacts (Ref. 3)	Covers parallel ground to Ref. 2
			Evaluation Assessment Alternatives	0.6 for Data Acquisition aspects of Weather Services	Internal Audit: covers efficiency & economy
		Public	Evaluation; Impacts	0.4 of Impact Evaluation (Ref.5)	
		Marine	Evaluation; Alternatives, Rationale	0.8 of Alternatives and Rationale Evaluation (Ref.6)	Includes Ice
		Aviation Economics	Evaluation; Achievement	0.35 of Achievement of three prime Evaluation (Ref.7) elements (Public, marine, aviation)	
		Canadian Forces	Evaluation; All issues	1.0 (Ref.8)	
	Climate Services		Frameworks; All issues	1.0 (Ref.10)	
			Evaluation; Achievement	0.4 of Achievement Evaluation (Ref.11)	
	Ice Services				(see Marine above)
	Air Quality Services & Atmospheric Research				
Conservation & Protection	Inland Waters & Land Mgmt	Water Mgmt & Water Surveys	Framework; all issues	0.85 (Ref.12)	For all elements. N.B. The I.W. Directorate was the subject of a favourable OAG study in 83/84.
		Water Mgmt.	Framework; all issues.	0.85 (Ref.15)	Sediment Survey element only.
		Water Surveys (Data)	Framework; Alternatives	0.85 (Ref.16)	All water quantity elements.

* These studies addressed the Weather Services component overall.

PLANNING ELEMENT	ACTIVITY/ COMPONENT	ACTIVITY/ SUB-ACTIVITY/ ELEMENT	PHASE & ISSUE COVERED	DEGREE OF COVERAGE & REFERENCE	REMARKS
		Water Surveys (Hydrometric)	Framework; all issues	0.2 (Ref.17)	
		Land Conserv. & Land Data	Framework; all issues	0.7 (Ref.18)	For all elements
		Conser-vation	Framework; all issues	1.0 (Ref. 19)	
		National Data Base			
		Economic Impact			
	Wildlife Mgmt	All Elements*	Framework; all issues; less Alternatives.	0.85 (Ref. 20)	
		Migratory Birds Conser-vation	Evaluation; all issues less Alternatives	0.6 (Ref. 21)	
		Inter-national Wildlife Interests			
		Wildlife Conser-vation			
		Habitat Protection			
	Environ-mental Protection	All Elements**	Framework; all issues less Alternatives; Framework; all issues	0.3 for each element (Ref. 22) 0.3 for each element (Ref.23)	
		Priority Issues			Acid Rain and Toxic Chemicals
		Industrial Programs			
		Commerical Chemicals			
		Waste Management			
Parks	Parks Operation	Resource Protection Management	Framework; all issues Evaluation; all issues	1.0 (Ref. 26) 1.0 (Ref. 27)	Includes Heritage elements and Park Facilities
		Maintenance of Park Facilities.			

* These studies addressed the Wildlife Management component overall.
** These studies addressed Environmental Protection overall.

PLANNING ELEMENT	ACTIVITY/ COMPONENT	ACTIVITY/ SUB-ACTIVITY/ ELEMENT	PHASE & ISSUE COVERED	DEGREE OF COVERAGE & REFERENCE	REMARKS
		Park Supervision			
	Park Development	Acquisition Conservation & Development of Heritage Places.			
Admin-istration	FEARO		Framework; all issues.	0.05 (Ref. 28)	

APPENDIX C

RESOURCE ESTIMATES ($)

APPENDIX C

RESOURCE ESTIMATES
($ thousands)

To derive the figures given below, the cost of executing a full evaluation study from Framework to Study proper was estimated. (Allowance was made for overlaps between the three phases of Framework, Assessment and Study.) These figures are those shown under Total Requirement.

The monetary value of the currently valid work, as discussed in Appendix B, was then subtracted to find the Outstanding Requirement.

ACTIVITY	TOTAL REQUIREMENT	ESTIMATED VALUE OF EXISTING COVERAGE	OUTSTANDING REQUIREMENT
AES			
1. Public Weather	150	30	120
2. Marine	100	50	50
3. Aviation	150	5	145
4. Climate	80	30	50
5. Air Quality	100	0	100
C&P			
6. Water Mgmt	100	35	65
7. Water Surveys	100	40	60
8. Land Conserv.	80	15	65
9. Land Data	60	0	60
10. Migratory Birds	60	35	25
11. Int'l Wild. Interests	60	0	60
12. Wild. Conserv.	80	10	70
13. Indust. Programs	120	15	105
14. Comm. Chemicals	120	15	105
15. Waste Mgmt.	120	15	105
PARKS			
16. Operations	320	80	240
17. Development	160	40	120
	1960	415	1545